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<Note> Preliminary surveys of chimpanzees in Gouéla area and Déré Forest, the Nimba Mountain Biosphere Reserve, Republic of Guinea

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Located in the heart of the Upper Guinea forest ecosystem, West Africa, Mont Nimba delimits the tri-national border between Guinea, Côte d'Ivoire and Liberia (cf. Fig. 1). This site exhibits a unique and highly endemic biodiversity which has been protected and scientifically explored for over sixty years. Among other protective statuses, it was gazetted a World Heritage natural site (1981) and Biosphere Reserve (1982), with a core area estimated at 217.8 km².

The presence of chimpanzees in the Nimba area was reported sixty-five years ago¹, but growing interest for the species began in 1993^{2,3,4}. Recently, the Nimba Mountain was declared an "Extremely Important Area" for the conservation of West African chimpanzees⁵. Nevertheless, to date, available information on chimpanzees inhabiting the Nimba range is still scarce and almost nonexistent concerning the neighbouring Déré forest⁶.

From March to April 2006 and December 2006 to May 2007, 68 days were spent surveying chimpanzees (*Pan troglodytes verus*) in two poorly explored parts of the Nimba Mountain: the Gouéla area (south slope of the northern part of the mountain range) and the Déré forest. The survey method combined 62 days of field

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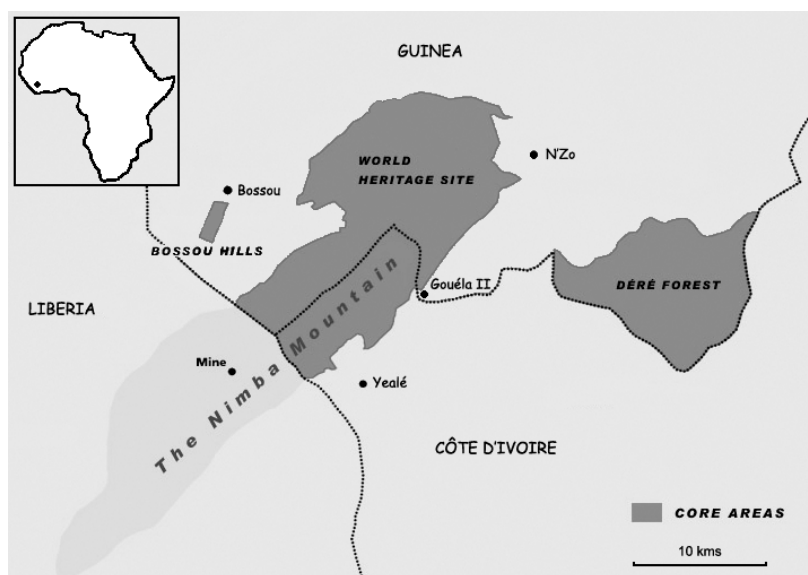


Fig. 1 The Nimba Mountain Biosphere Reserve.

reconnaissance carried out to assess the status of chimpanzees and their habitat, and 6 days of interviews with villagers. Thirty-two interviews were performed in 18 human settlements on the east side of the Nimba Mountain to obtain a preliminary idea of the chimpanzee presence. Interviewees consisted of hunters and cultivators, and were contacted either individually or in groups of 2 to 14 people. Questions were directed at the chimpanzee presence, abundance, distribution and their relationship with humans. Field surveys consisted of daily reconnaissance walks performed in order to cover the largest possible area, investigating evidence of chimpanzee presence and following their tracks. A GPS unit (Garmin® 60CS) was used to record the surveyed tracks and all evidence of chimpanzee presence was geo-referenced. Base camps established in the vicinity of surveyed areas were visited at least every 3 days. The surveying team was composed of 1 to 3 local assistants plus one of the authors (GN).

Over 49 days, the Gouéla area was widely explored from 3 base camps: Gouéla II, Taï and G'Bié (cf. Fig. 2). Thirty-seven days were spent in Gouéla II base camp, which was the most extensively explored site. The survey of Déré forest was carried out over 13 days, amongst which 10 days were spent in the western part of Cavally River (cf. Fig. 2).

Results for the Gouéla area

About 300 kilometres were walked in the Gouéla area. GN followed and recorded evidence of chimpanzees such as beds (=nests)⁷, faeces, alimentary leftovers, footprints, vocalizations and ant-catching wands (cf. Table 1).

Table 1 Chimpanzee-related evidences.

Items	Number	Altitude (m)
Groups of recent bed ⁽ⁱ⁾	19	750-1050
Groups of old bed ⁽ⁱⁱ⁾	11	450-720
Faeces ⁽ⁱⁱⁱ⁾	19	720-950
Footprints	7	930-1100
Vocalizations ^(iv)	5	750- 800
Trails used by chimpanzee	6	850-1100
Ant-catching wands ^(v)	7	820
Alimentary leftovers	3	800-1000

(i) Mean size of recent bed groups: $7.47 \pm \text{SD}$; $\text{SD}=5.57$

(ii) Mean size of old bed groups: $3.45 \pm \text{SD}$; $\text{SD}=2.02$

(iii) Seeds of *Musanga cecropioides*, *Trema guineensis*, *Harungana madagascarensis*, *Aframomum* sp. and *Ficus* sp. were found in chimpanzee faeces.

(iv) Altitude refers to the position of the author when vocalizations were heard.

(v) One ant-dipping site was observed. Vegetal materials used: *Aframomum* sp.³, *Microdesmis keayana*³ and *Mareya micrantha*¹.

The evidence for the distribution of chimpanzees showed a strong spatial preference for the highest parts of the forest, at the limit between altitude grasslands and forested areas. However, evidence of chimpanzees was

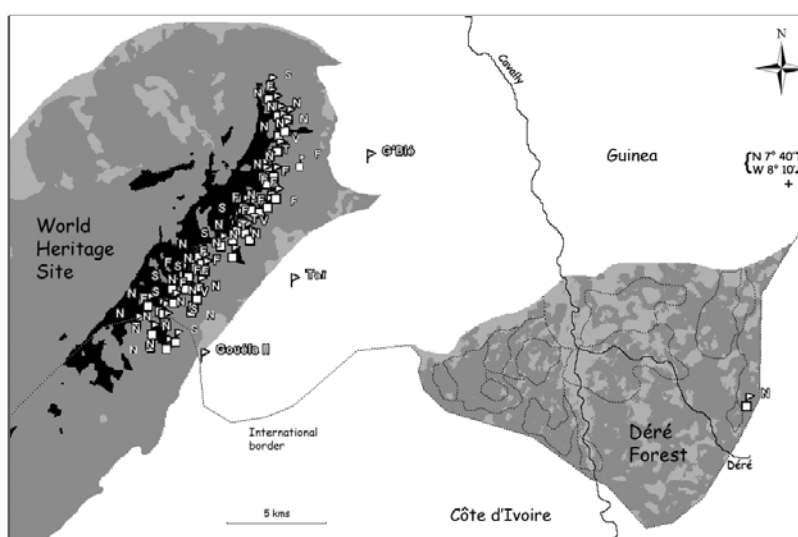


Fig. 2 Distribution of chimpanzee-related observations in Gouéla area. Black areas = altitude grasslands; dark grey and light grey areas = forested and non-forested zones of the reserve's core area. N = nesting site; F = chimpanzee faeces; T = animal trail on which evidence of chimpanzees was observed, V = chimpanzee vocalizations heard and S = other isolated chimpanzee tracks. Gouéla II, Taï and G'Bié = base camps. Dotted line = walked track in Déré.

also seen in the lower parts of the forest (450-720 m high), but these were rare and relatively old.

In general, the Gouéla forest is well-protected from clearing. Nevertheless, an important poaching pressure was revealed through the observation of 27 snares and numerous cartridges, 3 encounters with hunters in the integrally protected area and 49 gunshots heard during 23 nights out of the 49 days of field activity.

Taken together, these results suggest that a relatively important group of chimpanzees was sporadically exploiting the highest and most remote part of the Gouéla area at the time of this survey. They were believed to be highly mobile in their search for scarce plant-food resources or in their avoidance of hunters.

Results for the Déré forest

About 110 kilometres were walked within the limits of the Déré forest, and only a single piece of evidence of the presence of chimpanzees was seen in 13 days. The valley of Cavally as well as the north part of the forest has been totally cleared, including gallery forests, and currently consists of a mix of fallow lands and field under cultivation. The western part of the Cavally River was broadly surveyed, but no chimpanzee tracks were observed, which corroborated the local people's statements: "chimpanzees have left Déré, we cannot hear nor see them anymore". The eastern part of the Cavally River and particularly south of the Déré River is occupied by Ivorian rebel forces, which prevented us from entering the forest. However, discreet continuation of reconnaissance allowed observation of the only evidence of chimpanzee presence in the entire Déré Forest. This consisted of a very old bed built about 25 meters high in a tree of the species *Aningeria altissima*, close to the southeast border with Côte d'Ivoire. According to the local people, chimpanzees would come annually from Côte d'Ivoire at the end of the rainy season. This would be congruent with the age of the observed bed.

Logging activities conducted in Déré in 1999-2000 have created deep penetration routes that have later favoured human encroachment and settlement, which led to drastic annual clearance for cultivation. Today, even if some patches of forest containing huge and various tree

species can still be found, the fragmentation is so extensive that the whole ecosystem is in a critical situation.

Ongoing field work should provide further data and longitudinal records on habitat utilization, ranging patterns and conservational status of chimpanzees in the Nimba Mountain Biosphere Reserve.

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